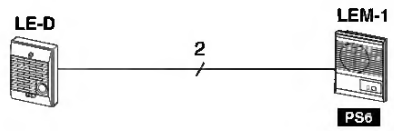
LE Series
MASTER SELECTIVE INTERCOM

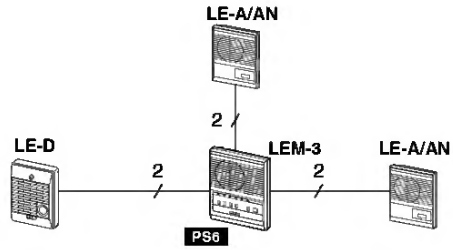
Models: **LEM-1**
LEM-3

INSTALLATION & OPERATION MANUAL

1 SYSTEM OUTLINE & COMPONENTS

LEM Open Voice Master Selective Intercom System is a single master system with 1- and 3-call master stations. Works with "LE" style door and inside sub stations.





PS6: 6V DC power supply.

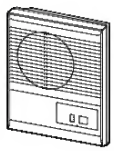
■ Package contents

- LEM master (LEM-1 or LEM-3)
- Mounting bracket (LEM-1 only)
- Packet of screws
- Installation & Operation Manual

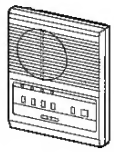
■ Components available

• **Master stations** • **Sub stations** • **Power supply**

LEM-1, 1-call



LEM-3, 3-call



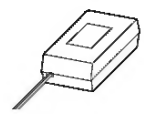
LE-A, w/CALL

LE-AN, w/PRIV. and call

LE-D, surface-mount

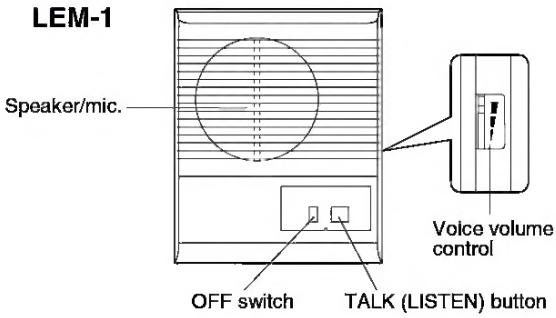
LE-DA, flush-mount

PS-6D,PS-6M or **SKK-620** In USA

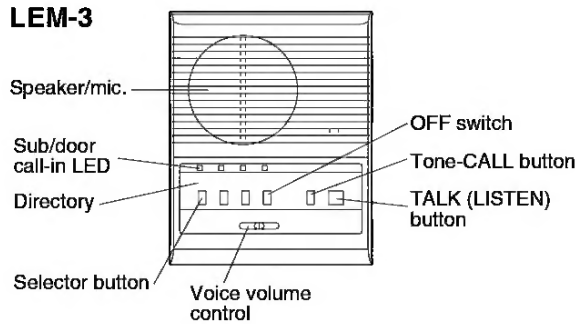


2 NAMES & FEATURES

LEM-1



LEM-3



■ Features

Single-master open voice communication
- 1 or 3-call masters
- 2 conductors per sub, homerun
- Voice or tone call
- Desk or wall-mount use
- Handsfree remote reply at sub

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3 PRECAUTIONS ON INSTALLATION & WIRING

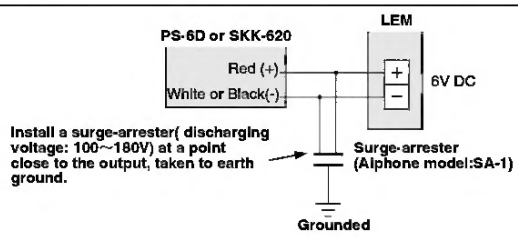
⚠ CAUTION

- ★ LEM equipment, except for LE-D or LE-DA, is designed for indoor use only. Do not install outdoors.
- ★ LEM is an electrical device, which must not be exposed to water or any other liquid.
- ★ Do not connect AC wires to any terminal on any unit.
- ★ Do not connect any power source other than specified to terminals +, – on LEM. Doing so can cause fire or damage the unit.
- ★ Unplug power supply while making any wire terminations.
- ★ Do not install LEM equipment in any of the following locations, as it may cause the system to malfunction;
  - – High or extreme cold temperature areas: under direct sunlight, near equipment that varies in temperature, in front of air-conditioner, inside a refrigerated area, etc.
  - – Places subject to moisture or humidity extremes,
  - – Places subject to environmental conditions, such as oil, dust, chemicals, salt, etc.
  - – Places subject to constant vibration or impact.

IMPORTANT–Observe the following to prevent fire, injury to people, malfunction, or damage to the equipment.

- ★ Do not open the LEM equipment except for wiring. Ask qualified personnel.
- ★ Do not change or modify LEM.
- ★ Keep moisture away from unit and AC cord.
- ★ Keep all DC wiring at least 30cm, 20" away from AC wiring, fluorescent lighting, or dimmer switches. Cross AC wiring at a 90° angle.
- ★ Keep AC cord (power supply) and DC wiring from being pulled or crushed.
- ★ LEM is not operable during a power failure.
- ★ In areas where broadcasting station antennas are close by, intercom system may be affected by radio frequency interference.
- ★ Make sure wires are connected properly before plugging in DC power supply.
- ★ Severe weather conditions, such as lightning storms, may cause damage to LEM equipment. We recommend that power surge protection be installed as follows: (However, this does not guarantee that no damage will occur.

- If the power supply has a GROUND terminal, take it to an earth ground. In this case, a separate surge arrester is not necessary.
- When using a power supply that has no GROUND terminal, install a surge arrester near the output as shown.

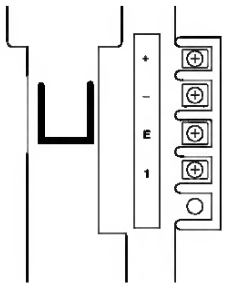


■ **Before actually mounting the LEM equipment, the contents of this Manual must be thoroughly read and understood.**

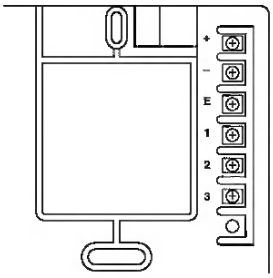
4 WIRING

■ Actual terminal locations

LEM-1



LEM-3



+, – : 6V DC power supply
E: Common communication
1 ~ 3: Sub 1 ~ 3 calling and communication

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■ Adjusting voice volume

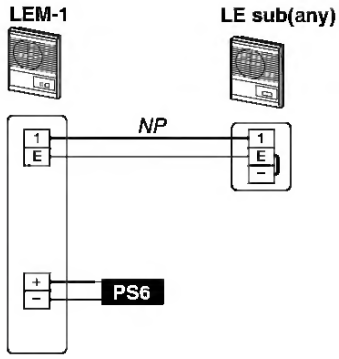
Voice communication volume is adjustable with the switch which is located on right side on LEM-1, and on bottom of front panel of LEM-3.

■ LE sub stations

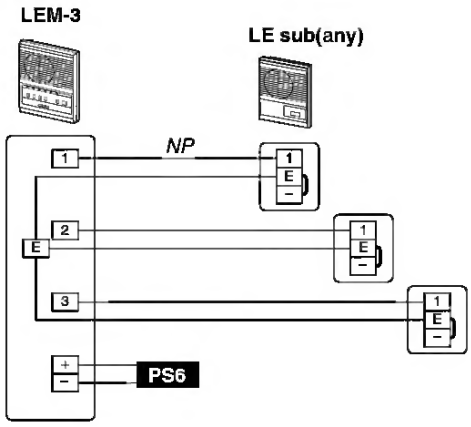
Do not connect more than one LE station on a numbered terminal, as it causes inferior call tone and voice. Do not parallel two LEM masters connected to the same sub station.

■ Wiring diagrams

• LEM-1 system



• LEM-3 system

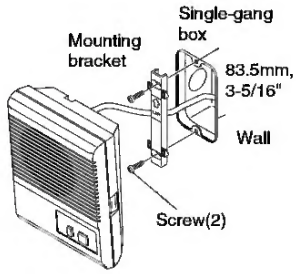


★ Do not remove the shorting link on LE sub.
PS6: SKK-620 (+) Red, (–) Black
PS-6D (+) Red, (–) White
PS-6M
Install a power supply within 20m, 66" of LEM master.

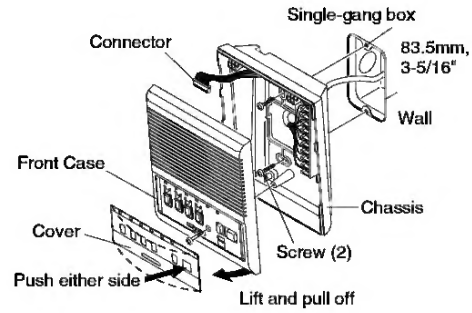
NP: Non-polarized

5 MOUNTING

• LEM-1



• LEM-3



★ For surface wall cable run, pass through opening on top or bottom of back case.

6 OPERATIONS

■ Calling sub

On LEM-1, depress both OFF and TALK buttons to ring.
On LEM-3, depress a sub selector button and press CALL button to ring.
Depress TALK button to speak, and release to listen.
Depress OFF switch at conclusion for standby. If not, LEM is not called audibly.

■ Receiving

Sub call-in rings with oscillating tone, plus an LED lit 20 sec. on LEM-3.
Momentarily press TALK button to pop up OFF. On LEM-3, first depress a lit selector button. Reply holding down TALK button. Listen to the sub, releasing.

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■ Receiving during communication (on LEM-3)

Call-in from another sub lights an LED only, staying 20 seconds. Upon present communication finished, depress an LED lit selector button.

■ LE sub stations

To call LEM master, simply press CALL button. It rings on LEM as long as the button is depressed. Upon selected, voice from LEM is heard, reply handsfree toward the unit.

7 TECHNICAL PRECAUTIONS

★ LEM equipment is rated to operate between temperatrues 0°C ~ +40°C (+14°F ~ +104°F).
★ LE-D & LE-DA door stations are weather-resistant, but it is suggested to protect against direct weather. Do not apply caulking or sealant around door station. The opening allows moisture to dissipate.
★ Do not wash LE-D/DA with direct pressure water.
★ Clean LEM equipment with a soft cloth dampened with neutral household cleanser. Never use an abrasive cleaner or cloth.

8 SPECIFICATIONS

- **Power source:** 8V DC, 200mA max.
- **Power supply:** Use a PS-8D,PS-6M or SKK-620 power supply.
- **Communication:** Sub call-in with tone and a lit LED, 20 seconds. (LED on LEM-3 only)
  Press TALK button to transmit, release to listen.
  Output: 350mW.
- **Wiring:** 2 wires per sub, non-twisted & non-polarized, shielded.
- **Cable specified:** #822202 in USA.
- **Wiring distance:** *LEM to LE subs*

Diameter	0.65mmϕ	1.0mmϕ
Distance	200m	480m

22AWG	18AWG
850'	1,570'

- **Dimensions & weight:**
  LEM-1: 180H x 132W x 51D (mm).
  6-1/4" H x 5-1/4" W x 2" D. 300g (0.66 lbs.) approx.
  LEM-3: 180H x 143W x 55D (mm).
  7" H x 5-5/8" W x 2-1/4" D. 400g (0.88 lbs.) approx.

WARRANTY

Aiphone warrants its products to be free from defects of material and workmanship under normal use and service for a period of one year after delivery to the ultimate user and will repair free of charge or replace at no charge, should it become defective upon which examination shall disclose to be defective and under warranty. Aiphone reserves unto itself the sole right to make the final decision whether there is a defect in materials and/or workmanship; and whether or not the product is within the warranty.
This warranty shall not apply to any Aiphone product which has been subject to misuse, neglect, accident, or to use in violation of instructions furnished, nor extended to units which have been repaired or altered outside of the factory. This warranty does not cover batteries or damage caused by batteries used in connection with the product.
This warranty covers bench repairs only, and any repairs must be made at the shop or place designated in writing by Aiphone.
Aiphone will not be responsible for any costs incurred involving on site service calls.

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